

REMARKS

Reconsideration of this application, as amended, is requested.

Claims 1, 4-7 and 11-14 remain in the application. Claim 1 has been amended to incorporate the limitations of claim 3 and to define the invention more clearly. Accordingly, claim 3 has been canceled. Claims 8 and 10 also have been canceled. New independent claim 11 and new dependent claims 12-14 have been added to define the invention further. In this regard, new independent claim 11 positively recites both the wire and the housing.

Counsel thanks Examiner Dinh for the courtesies extended during the interview on August 18, 2005. During the course of the interview, the undersigned attorney for the applicant discussed one very important aspect of the invention. In particular, the insulating coating on the wire is subject to thermal expansion and contraction when the wire is used in an environment that is subject to considerable temperature changes. This occurs often in automotive vehicles. The applicant herein determined that these thermal expansion and contraction cycles can cause the seal to move relative to the housing. Sufficient movement can cause one or more of the outer lips on the seal to move gradually rearwardly of the housing, thereby reducing the waterproofing between the seal and the housing.

Counsel explained that the application discloses several optional ways for addressing this problem. Each of these options is designed to create greater frictional resistance between the seal and the housing than between the seal and the wire. As a result, the thermal expansion and contraction cycles of the wire will cause movement

between the wire and the seal without significantly affecting waterproofing, and with virtually no effect on waterproofing between the seal and the housing.

Counsel discussed a proposed amendment that defined an aspect of the invention disclosed in paragraph 0006 and 0022 of the subject application. In particular, the proposed Amendment discussed at the interview defined the inner and outer lips as being of substantially identical shape. However, the inner and outer lips were formed in view of the dimensions of the wire and the cavity so that the outer lips would compress more than the inner lips. As a result, there would be greater frictional resistance between the seal and the housing than between the wire and the seal.

The Examiner emphasized that she is required to interpret the claim language broadly. The Examiner explained that the originally proposed phrase "substantially identical shapes" could be considered to mean "sinusoidal" as distinct from rectangular lips or pointed lips. With this broad interpretation, the assignees prior U.S. Patent No. 5,607,318 or U.S. Patent No. 5,611,706 could be considered to have inner and outer lips of substantially identical shapes (i.e., sinusoidal). The Examiner acknowledged that the seal in these reference would not appear to function in accordance with the stated objectives of the subject invention. However, the Examiner indicated that greater specificity would be required in the claims to distinguish structurally over the prior art.

The claims have been amended further herein to emphasize that the inner and outer lips have "substantially identical sizes and shapes when viewed along a cross-section taken centrally through the wire insertion hole" and before engaging the seal with the housing or the wire. Similar clarifying limitations were entered to new claim 11. It is submitted that the prior art does not teach or suggest a seal where inner and outer lips are

of substantially identical sizes and shapes and with the seal configured relative to the cavity and the wire so that the outer lips will compress more than the inner lips.

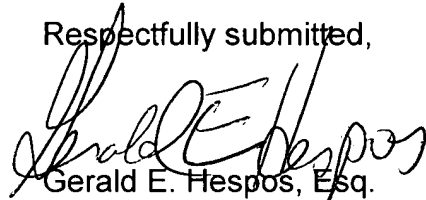
In this regard, the Makita et al. reference shows inner lips with configurations that are much different than the configurations of the outer lips. The outer lips 39 of Makita et al. have a much greater radial dimension than the inner lips 43 of Makita et al. It appears that there is very little deformation of either the outer lips 39 or the inner lips 43. The Makita et al. reference also has "gill-shaped" projections 49 that have a much different shape than either the outer lips 39 or the inner lips 43. In particular, the gill-shaped projections 49 have a very small longitudinal dimension so that the gill-shaped projections will fold over easily. The Makita et al. theory is that these folded over gill-shaped projections will achieve good waterproof sealing. However, the very flexible nature of these gill-shaped projections would not appear to be conducive to securely holding the sealing plug in position relative to the housing in response to thermal expansion or contraction of the wire.

The office action summarily stated that it would have been obvious to form the wall friction to be greater than that of the wire so that there will be no danger of the sealing plug being pulled out. It is submitted, with respect, that the Examiner has drawn conclusions based on the teaching of the subject application. Nothing in the prior art suggests that there is any benefit to having greater frictional retention between the sealing plug and the housing than between the sealing plug and the wire. The references appear to suggest either the same degree of resilient deformation of the outer lips as compared to the inner lips or very thin flexible gill-like projection that might provide good water

resistance, but with no suggestion of resistance to thermal expansion and contraction of the wire.

In view of the preceding amendments and remarks, it is submitted that the claims remaining in the application are directed to patentable subject matter and allowance is solicited. The Examiner is urged to contact applicant's attorney at the number below to expedite the prosecution of this application.

Respectfully submitted,



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